CLAIMS:

We claim:

1. A method for simulating a run-time user interaction with a voice application, said method comprising the steps of:

loading a user simulation script programmed to specify simulated voice interactions with the voice application;

deriving from the voice application a nominal output of the voice application; and

processing the user simulation script to generate both a simulated output for the voice application corresponding to the nominal output and a simulated input for the voice application corresponding to a pre-determined user input to the voice application.

2. The method of claim 1,

wherein the user simulation script is specified in a customized mark-up language.

3. The method of claim 1,

wherein the step of processing further comprises simulating a text equivalent and an execution time for each of the nominal output and the pre-determined user input.

4. The method of claim 1,

wherein the simulated output simulates an output from a text to speech engine in response to the simulated input.

5.   The method of claim 1,

wherein the simulated output simulates an output from an automatic speech

recognition engine in response to the simulated input.

6.   The method of claim 1,

wherein the simulated output simulates a pre-recorded audio source.

7.   The method of claim 1, further comprising the steps of:

a)   deriving additional nominal outputs of the voice application;

b)   processing the user simulation script to generate additional simulated

outputs for the voice application corresponding to the additional nominal outputs;

c)   processing the user simulation script to generate additional simulated

inputs to the voice application; and

d)   repeating steps a), b) and c) until the user simulation script is exhausted to

simulate a complete set of user interactions with the voice application, in response to

and as input for a complete set of user prompts from the voice application.

8. A machine readable storage having stored thereon a computer program for simulating a run-time user interaction with a voice application, said computer program comprising a routine set of instructions which when executed by a machine cause the machine to perform the steps of:

loading a user simulation script programmed to specify simulated voice interactions with the voice application;

deriving from the voice application a nominal output of the voice application; and

processing the user simulation script to generate both a simulated output for the voice application corresponding to the nominal output and a simulated input for the voice application corresponding to a pre-determined user input to the voice application.

9. The machine readable storage of claim 8,

wherein the user simulation script is specified in a customized mark-up language.

10. The machine readable storage of claim 8,

wherein the step of processing comprises simulating a text equivalent and an execution time for each of the nominal output and the pre-determined user input.

11. The machine readable storage of claim 8,

wherein the simulated output simulates an output from a text to speech engine in response to the simulated input.

12.   The machine readable storage of claim 8,

wherein the simulated output simulates an output from an automatic speech

recognition engine in response to the simulated input.

13.   The machine readable storage of claim 8,

wherein the simulated output simulates a pre-recorded audio source.

14.   The machine readable storage of claim 8, further causing said machine to

perform the steps of:

a)   deriving additional nominal outputs of the voice application;

b)   processing the user simulation script to generate additional simulated

outputs for the voice application corresponding to the additional nominal outputs;

c)   processing the user simulation script to generate additional simulated

inputs to the voice application; and

d)   repeating steps a), b) and c) until the user simulation script is exhausted to

simulate a complete set of user interactions with the voice application, in response to

and as input for a complete set of user prompts from the voice application.

15.   A simulation tool for simulating a run-time user interaction with a voice

application running on an application server, said tool being configured to load a user

simulation script programmed to specify simulated voice interactions with the voice

application, and to: (i) process the voice application to derive a nominal output of the

voice application; and (ii) process the user simulation script to generate a simulated

output for the voice application corresponding to the nominal output, and to generate a

simulated input for the voice application corresponding to a pre-determined user input to

the voice application.

16.   The simulation tool of claim 15,

wherein the user simulation script is specified in a customized mark-up language.

17.   The simulation tool of claim 15,

wherein the simulated output simulates a text equivalent and an execution time

for the nominal output; and

wherein the simulated input simulates a text equivalent and an execution time for

the pre-determined user input.

18.   The simulation tool of claim 15,

wherein the simulated output simulates an output from a text to speech engine in

response to the simulated input.

19.   The simulation tool of claim 15,

wherein the simulated output simulates an output from an automatic speech

recognition engine in response to the simulated input.

20.   The simulation tool of claim 15,

wherein the simulated output simulates a pre-recorded audio source.